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Product Advantage, Marketing Synergy, and Product Launch Decisions: The Moderating Role of Competitive Hostility

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Abstract

A model is proposed to depict the links among product launch decisions and their determinants, namely, product advantage, marketing synergy, and competitive hostility. Managerial decisions for product launch include: product preannouncement, timeliness of launch, and launch intensity. It is argued that product advantage and marketing synergy directly influence launch decisions, while the relationships are moderated by competitive hostility. The empirical results indicate that product preannouncement is positively influenced by product advantage and marketing synergy. Likewise, product advantage and marketing synergy have positive impacts on the timeliness of launch. Nevertheless, neither product advantage nor marketing synergy has any influence on launch intensity. The relationship between preannouncement and product advantage, as expected, is strengthened by competitive hostility. However, the hypothesized moderation of competitive hostility on the relationship of preannouncement with marketing synergy was not confirmed. Competitive hostility fails to show the predicted moderating effect on the product advantage –launch timeliness link. In contrast, the influence of marketing synergy on launch timeliness decreases as competitive hostility increases. Finally, the impact of product advantage on launch intensity is negatively moderated by competitive hostility, while the influence of marketing synergy on launch intensity is positively affected by competitive hostility.

Key words: Product Launch, Product Advantage, Marketing Synergy, Competitive Hostility.

Introduction

Product launch is perhaps the most important, yet the most risky, part of new product development (NPD) process (Calantone and Montoya-Weiss, 1993). A launch plan for a new product can be viewed as similar to a marketing plan for existing products (Hultink, Griffin, Hart, and Robben, 1997). Product management at the launch stage of a new product development process aims to gain market acceptance, which, in turn, may maximize the chances of profitability (Guiltinan, 1999). Accordingly, a strategy for product launch can be considered as the decisions and activities necessary to present a product to its target market and begin to generate income from sales of the new product. The launch-related decisions are basically concerned with what to launch, where to launch, when to launch, why to launch, and how to launch (Hultink, Griffin, Hart and Robben, 1997). Despite its important and risky duality, product launch has been relatively underresearched in the existing managerial literature. Thus, limited decision-making guidance can be offered to managers on how to prioritize and integrate the various strategic and tactical options (Di Benedetto, 1999; Guiltinan 1999; Hultink, Griffin, Hart, and Robben 1997).

Montoya-Weiss and Calantone (1994) suggest that most of the influential factors of new product success are controllable, which implies that higher success rates can be attained if new product development activities, especially those involved in product launch, can be improved. Significant commitments of time, money, and resources would be inevitably associated with the decisions for product launch (Guiltinan, 1999; Hultink, Griffin, Hart and Robben, 1997). The literature has discussed product launch in terms of two broad categories of launch decisions: strategic and tactical (Di Benedetto, 1999; Hultink, Griffin, and Robben, 1997). Basically, strategic decisions refer to product and market issues, which are mostly determined at the early stage in the NPD process and usually hard to change at later stages. On the contrary, tactical decisions are concerned with the marketing mix decisions, which are usually finalized until later stages of the NPD process. Logically, strategic decisions are made before tactical decisions and the former has strong influences on the latter. Managers involved in new product introduction make their decisions based on their perception of internal and external environment. Guiltinan (1999) indicates that the managerial decisions for launch strategies and tactics, most often, hinges on important contingencies, which may include the product-market environment, the technological environment, and the firm's resource base.

The purpose of this study is to bridge a gap in our understanding of the nature of product launch. Specifically, this study has two related research objectives: (1) to investigate the relationships of product advantage and marketing synergy with product launch decisions; (2) to probe the moderating role of competitive hostility in such relationships. In other words, we test in the study whether product advantage and marketing synergy have impacts on product launch decisions and whether competitive hostility moderates the effects of product advantage and marketing synergy on the decisions of product launch.

Framework and Hypotheses

A conceptual framework illustrated in Figure 1 is proposed to depict the links among product launch decisions and their determinants, namely, product advantage, marketing synergy, and competitive hostility. In the proposed model, product launch includes three core managerial decisions: product preannouncement, timeliness of launch, and launch intensity. Product advantage is a product characteristic of interest that, one the one hand, stands for the result of new product development and, on the other hand, serves as an influential factor of final launch decisions. Marketing synergy represents a firm's resource that influences both the product development and launch. Competitive hostility herein captures one perceived aspect of external environment, which represents the interaction among market rivals. It is argued that product advantage and marketing synergy directly influence launch decisions, while such relationships are moderated by competitive hostility. According to the framework, we discuss the extant literature and propose the research hypotheses as follows.

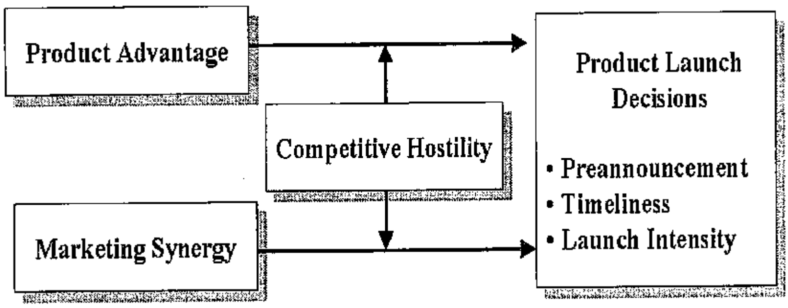

Figure 1 Conceptual framework for product launch decisions

1. Product Launch Decisions

Strategic launch decisions are basically concerned with four aspects of new product development: product strategy, market strategy, competitive stance, and firm strategy (Hultink, Hart, Robben, and Griffin, 2000). Product strategy involves the nature of the new product to be developed. Market strategy is formulated to identify the market where the product will be introduced. Competitive stance concerns the product's position versus those of the competitive products in the market. Firm strategy indicates the firm's overall orientation toward NPD efforts. Besides strategic launch activities, various tactical activities are highly associated with the success of new product introduction. The key marketing tactical elements of launch decisions center at the development of marketing mix. The tasks include determining acceptable price, high quality of selling effort, achieving appropriate distribution level, advertising, and technical support, good launch management and good management of support programs, excellent launch timing relative to customers and competitors, and marketing-related information-gathering activities (Di Benedetto, 1999).

Preannouncement. New product preannouncement is a communication to convey the product-related messages to other individuals in the market before launch (Eliashberg and Robertson, 1988; Rabino and Moore, 1989). The preannouncement has become an essential part of launch activities for facilitating new product introduction. In a study across a range of U.S. industries including consumer durable, pharmaceutical, textiles, computers, telecommunication, etc. (Eliashberg and Robertson, 1988), 51 % of the surveyed firms preannounced their new products.

By nature, preannouncing a new product is a communication process in which the preannounced messages flow from the sender (the firm) to the receiver (the target audience). The preannouncer may obtain feedback on the messages from the receiver. In a marketing sense, new product preannouncement plays a dual role in new product development and introduction. Basically, new product preannouncement is used as prelaunch marketing communications. The preannouncement, intrinsically, is also one form of competitive market signalling. The duality inherent in new product preannouncement distinguishes it from other communications in marketing (cf. Lilly and Walters 1997; Rabino and Moore 1989).

A firm normally needs to go through a series of decision-making processes to determine whether or not, and how, to preannounce its new products before actually taking precise market actions. The first, maybe the most important, managerial decision regarding new product preannouncement is whether to preannounce new products or to maintain secrecy (Heil and Robertson, 1991). The decisions for the preannouncements are usually coordinated, formalized, and implemented to align with a variety of overlapping strategic objectives (Rabino and Moore, 1989). Normally, the step of setting strategic objectives concurrent with the target audience selection.

The existing literature has found that firms are more inclined to preannounce their new products under certain conditions related to market, customer, and value chain (Robertson, 1993). Accordingly, these conditions represent driving forces for the occurrence of product preannouncement. For instance, preannouncing a new product is more advisable given certain patterns of customer behavior, including high switching costs to adopt the new product, substantial customer learning requirements, and a long decision process of adoption (Gatignon and Robertson 1985).

Timeliness of Launch. Timing of market entry or product launch has been recognoized as an important managerial issue in new product management (see Chryssochoidis and Wong, 1998; Green, Barclay, and Ryans, 1995). Despite of its importance, launch timing is still an area in need of more academic attentions. A firm won't know the best timing of introducing its new product without an advanced understanding of the antecedents of launch timing (Di Benedetto, 1999). Timing decision is concerned with when to enter a market. No single timing strategy has proved best in all instances of extant research (e.g., Golder and Tellis, 1993). The rationale underlying timing decision is mainly associated with the advantages and disadvantages that accrue to pioneers (first-movers) and late entrants (late-movers) (Green, Barclay, and Ryans, 1995). The timing of product launch can be viewed from the perspectives of the company, the competition, and the customer. In the arena of product management, when to launch is as important as the execution of marketing mix elements (Di Benedetto, 1999). A study of product launch (Lee, Smith, Grimm, and Schomburg, 2002) shows that the shareholder wealth effect becomes greater if a firm introduces a product faster than its rivals does.

Timeliness can be defined as the actual availability of the new product within- or faster than- the planned (scheduled/anticipated) time frame for product availability (Chryssochoidis and Wong, 1998). Timeliness reflects the firm's ability to adhere to a planned schedule for new product launch, and is gauged by the difference between management's expected time frame and the time actually taken to introduce a new product in target markets. The recent market trends show that product life cycles are shortening mainly because of product obsolescence (Cordero, 1991; Hultink, Hart, Robben, and Griffin, 2000; Rosenau, 1988). In a market characterized by rapid obsolescence, firms would regard time as a scarce and valuable resource, making time minimization its central objective. As a result, speed becomes an important strategic weapon for market competition (Cordero, 1991). In response to the eager willingness of customers to pay for innovative products, firms are supplying their products very quickly and are marketing them aggressively. Saving time help the firms catch market windows and increase competitiveness.

Cordero (1991) summarizes two managing for speed product strategies:

organizing product development for speed and organizing product manufacturing for speed. Organizing product development for speed mainly resorts to the use of faster phased or concurrent approaches for product innovation. Organizing product manufacturing for speed are often involved in using flexible manufacturing techniques such as jut in time (JIT) for standard products. Computer-aided techniques for speed are also widely adopted. Likewise, Millson, Raj, and Wilemon (1992) identified five broad categories of approaches to accelerating time to market: simplify operations, eliminate delays, eliminate steps, speed up operations, and parallel processing of steps.

Speeding up cycle time, however, is not a panacea that would work without any risk involved (Calantone, Schmidt, and Di Benedetto, 1997). Purely shortening the length of time between conception and production can be dangerous and costly if the quality of products suffers (Griffin, 1993). A rush to introduce a new product may result in a diseconomy if substantial post-launch time is spent on debugging or if the firm's overall quality image is damaged. In general, the appropriateness of launch timing can be evaluated relative to business unit goals, to competitors, and to customers; with respect to channel cooperation and coordination; with respect to execution of promotions to the channel and the trade; with respect to the resulting sustainable competitive advantage (Di Benedetto, 1999).

Launch Intensity. One influential factor of business success is the magnitude of a firm's investments in R&D, production capabilities, and, most importantly, marketing expenditure. Especially, promotional activities are one major aspect of new product introduction in which a firm greatly invests at entry and during the entry period (Green, Barclay, and Ryans, 1995). A firm's competency for product launch is largely dependent on the required promotional emphasis (Guiltinan, 1999), and the promotion support at the time of launch plays a critical role in determining new product success.

Compared to consumer launches, industrial goods companies' product launches are perceived relatively weak at promotion. In reality, industrial launches usually receive poor attention and low expenditures, while consumer product launches disseminate mass advertising messages delivered through multiple channels (Hultink, Hart, Robben, and Griffin, 1997). Nevertheless, Beard and Easingwood (1996) show that a firm in the high-technology market may profitably launch its new products by using a variety of different promotional elements that fit the market structure. Moreover, they emphasize the importance of adequate promotion investment in new product introduction. Likewise, Hultink, Griffin, Hart, and Robben (1997) include promotion expenditures and salesforce intensity in their product launch study. In terms of launch support, we may classify the marketing strategies used in new product introduction as skimming (low promotion) and penetration (high promotion) (Reddy, Holak, and Bhat, 1994).

2. Product Launch Decision Context

In making the decisions for product launch, managers always shape important contingencies based on their perceptions of internal and external environment. Among the most important, the product characteristics, firm's resource base, and market environment are often selected as major situational factors constructing the decision context (Guiltinan, 1999). Accordingly, product advantage, marketing synergy, and competitive hostility respectively stand for the contextual constructs of interest in the research.

Product Advantage. *The successes of new product development projects often result from products with a great competitive advantage (Gatignon and Xuereb, 1997; Song and Parry, 1997). Product advantage can be captured in terms of the comparative price and performance for a new product with respect to the existing products in the market (Guiltinan, 1999). Overall, the evaluation of product performance may cover physical, psychological, and financial dimensions, e.g., social prestige, savings in time or effort, a decrease in discomfort, and the immediacy of the benefit. Managers make their strategic or tactical launch decisions partly based on their perception of relative product advantage. The particular features and relative innovativeness of the product—attributes, benefits, procedures, and occasions for usage, etc.—are the primary determinants of product advantage. The greater the number and importance of new benefits and of levels of improvement over existing benefits, the greater the potential relative advantages (Gatignon and Xuereb, 1997).*

The decisions for product launch, in a sense, are those primarily used to clarify or leverage product advantages (Guiltinan, 1999). Hence, it seems beneficial for a firm to communicate product-related messages to customers earlier before launch when the advantage of its new product is great. The rationale underlying early preannouncements is to reduce their adoption resistance (Ram 1989; Brockhoff and Rao 1993), enhance their learning (Eliashberg and Robertson 1988), induce positive expectations (Lilly and Krishnan 1996), or enjoy the pioneership (Kerin, Varadarajan, and Peterson 1992). In short, preannouncement may become a powerful tool to establish or educate the market well in advance of launch when the product advantage is great. Preannouncing a product with greater advantages can also increase the support of other key stakeholders who may use the messages to make some specific management decisions. For instance, channel members may use the preannounced information for the purpose of stock management (Brockhoff and Rao, 1993). Hence, new product preannouncements in the context of great product advantage may be released earlier with a view to allowing for the audiences' cognitive efforts to collect and interpret messages (Burke, Cho, DeSarbo, and Mahajan 1990; Lilly and Krishnan 1996; Lilly and Walters 1997).

Greater product advantage is more likely to lead to faster launch as well. Fast launch may help the firm enjoy pioneership in the market. The uniqueness of the new product makes the launch planning and administration easier because product superiority shortens the commercialization process. The consumer adoption process also encourages the firm to conduct earlier launch for triggering their cognitive process, which may reduce customer resistance to an innovation (Ram 1989; Rogers 1983; Sheth, 1981). From a competitive perspective, faster launch can lever up product advantage so that the product can gain a preemptive stance.

A new product affiliated with a greater advantage may save on communication efforts. This means that a strong new product does not have to be launch in the support of very intensive marketing communications. An advantageous new product may well be perceived unique and attractive. The firm does not need to engage in mass and intensive marketing communications to create and sustain competitive advantages. It is therefore predicted that:

H1a: The greater the product advantage, the more likely the preannouncement will be.

H1b: The greater the product advantage, the better the launch timeliness will be.

H1c: The greater the product advantage, the lower the launch intensity will be.

Marketing Synergy. *In the launch context, marketing synergy refers to a product development project's fit with the available marketing research, sales force, distribution, and advertising and promotion skills and resources (Song and Montoya-Weiss, 2001). Marketing synergy also connotes the congruency between the existing marketing skills of the firm and the marketing skills needed to execute a new product initiative successfully (Henard and Szymanski, 2001). According to resource-based theory, better synergy between a firm's skill and resource base and project requirements should be more likely to have better project outcomes (Brown and Eisnehardt 1995). Marketing synergy serves to gain product success mainly through influencing both competitive and market intelligence and the proficiency of marketing activities (Song and Parry, 1997).*

Marketing synergy should create proficiency in marketing activities for introducing new products. Viewed as information-processing task groups, new product development project teams may translate the benefits of skill and resource synergy to development process proficiency. As suggested by information-processing theory, new product development is a series of information acquisition and utilization activities designed to reduce uncertainty, requiring relevant uncertainty identification and the uncertainty-reducing instruments. A gap exists between the amount of information required to perform particular new product development activities and the amount of information already possessed by the firm if the project team lacks the synergy between project needs and available resources and skills (Song and Montoya-Weiss, 2001).

A firm may adopt product preannouncement to increase the chance of a successful product launch by imposing direct influence on customer adoption decisions (Burke, Cho, DeSarbo, and Mahajan, 1990; Brockhoff and Rao, 1993) or creating marketing hype (Lilly and Krishnan, 1996; Rabino and Moore, 1989). The preannouncement can affect customer adoption behavior before launch not only by directly informing and persuading the customer but also by engendering the supportive mechanisms within a social system (Gatignon and Robertson, 1985). The efforts to create such mechanisms can be best described by the concept of marketing hype, which refers to a set of prelaunch marketing activities intended to create a favorable and supportive market environment for the introduction of a new product (Wind and Mahajan 1987). The creation of marketing hype for the product involves the development of marketing strategies aimed at a broader set of relevant stakeholders such as suppliers, distributors, providers of support products, media, opinion leaders, etc. As mentioned, a firm that possesses great marketing synergy enjoys higher proficiency in planning and managing product launch. Such a firm may be inclined to influence customer directly or create marketing hype for the forthcoming product by conducting new product preannouncements.

A firm with greater marketing synergy possesses a better understanding of market and competitive intelligence as it is more likely to engage in acquiring information about the buyers and competitors in the market, and it acts more quickly on market information. In new product development process, interfunctional coordination, mainly between R&D and marketing departments, heavily rests on information sharing at different development stages (Craig and Hart, 1992). Hence, the marketing department must collect and transfer information about user needs, competition, or other market characteristics to the R&D department. Greater marketing synergy enables the firm to know not only how to match its competency with market needs but how to do so at the right time.

Superior synergy means sufficient and skillful resources. Marketing synergy will lead to higher proficiency in planning and executing launch activities. Expectedly, a firm with greater marketing synergy will try to leverage its advantage in marketing research, sales force, distribution, and promotion skills to support product launch. It is therefore predicted that more involvement and resources will be indulged in the launch activities.

H2a: The greater the marketing synergy, the more likely the preannouncement will be.

H2b: The greater the marketing synergy, the better the launch timeliness will be.

H2c: The greater the marketing synergy, the greater the launch intensity will be.

Competitive Hostility. *The perceived hostility of market environment can be captured by the extent of threat to which the intensity, vigor, and multifacetedness of* *interfirm competition may exist in the firm's target market (Calantone, Schmidt, and Di Benedetto, 1997; Li and Calantone, 1998; Song and Parry 1997). Firms in a hostile market tends to be afflicted with intense price, product, distribution and technological competition, regulatory restrictions, labor shortages, materials shortages, and negative demographic trends. Rapid changes, one major characteristic of competitive hostility, makes it difficult for any firm to obtain accurate and timely information.*

In the context of higher competitive hostility, a firm is more likely to focus on increasing competitive advantage in the market if its new products have greater advantages. The motive to seek competitive advantage may drive the firm to involve proactive preannouncing activities since "proactiveness" represents an important trait for gaining and maintaining market leadership (Lumpkin and Dess 1996). The benefits of new product preannouncements include preemption and competitive norms of conduct (Gatignon, 1984). The firms with advantageous new products should be more inclined to forestall rivals, set standardization of specifications, or prevent competitive misconduct through the preannouncements than those without product advantage.

The key premise of new product development is that firms should not sacrifice product performance in order to rush new products to markets. A trade-off between the time-to-market and product performance is always the center of decision-making for time-based product competition (Bayus, Jain, and Rao, 1997). Timing of entry affects the competitive positioning of the product at entry as the mix of competitors and customer expectations differ (Green, Barclay, and Ryans, 1995). Under a highly competitive condition, a firm will be more inclined to launch an advantageous product quickly because, in this condition, product advantage may lessen the firm's concerns about fast launch and strengthen the beliefs in achieving competitive advantage.

A hostile competitive environment increases the importance of marketing activities in launching new products. Undoubtedly, a new product with greater advantage enjoys uniqueness, which differentiates it from the competitors' products. When market competition is stronger, the firm with an advantageous product cannot merely rely on such product-inherent advantage to create perceived uniqueness.

Instead, it will invest more heavily in launch activities under hostile environmental conditions, meaning that the negative relationship between product advantage and launch intensity is weakened by competitive hostility.

H3a: The positive effect of product advantage on the likelihood of preannouncement increases as competitive hostility increases.

H3b: The positive effect of product advantage on the timeliness of launch increases as competitive hostility increases.

H3c: The negative effect of product advantage on the intensity of launch decreases as competitive hostility increases.

A market characterized by intensive competition is inherently associated with higher competitive cuing risks (Calantone and Schatzel, 2000; Eliashberg and Robertson, 1988), which may even constrains a firm with strong marketing synergy from preannouncing its new products. Competitive cuing risks are perhaps the most salient among all the risks of preannouncing new products. The preannouncements may offer competitors cues by which they can counterattack the preannouncer's market entry moves quickly and effectively (Heil and Robertson 1991). Inevitably, a preannouncing firm has to consider the negative impacts of competitive cueing on its motives for achieving a competitive strike (Eliashberg and Robertson 1988). As such, the motivations that drive a marketing-proficient firm to preannounce are weakened due to the perceived threat of competitive retaliation. Therefore, the positive link between marketing synergy and a firm's propensity to preannounce decreases as competitive hostility increases.

Bayus, Jain, and Rao (1997) indicate that speeding a new product to market in an attempt to establish a first-mover advantage is not always a good idea. A firm equipped with marketing synergy should know well the consequences of rushing new products to market. After all, the success of the fast launch strategy greatly depends on how well a firm understands both the market and its competitors. The firm with higher marketing synergy is more skillful in understanding the competitors' strengths and weaknesses, developing competitive advantages, and anticipating competitors' reactions (Gatignon and Xuereb, 1997). To make the right launch decisions, the firm will conduct a careful, yet time-consuming, analysis of the potential trade-off among time to market, product performance, and interfirm rivalry. Hence, the positive effect of marketing synergy on launch timeliness decreases as competitive hostility increases.

When competitive hostility is high, firms with higher marketing synergy enjoys better proficiency in planning and executing launch activities than those without. A well-structured launch plan cannot be developed without taking the context of competitive dynamics into consideration. The higher marketing synergy the firms have, the more capably they can gather competitor intelligence, which enables them to formulate more comprehensive and competitive strategies. More involvement and expenditure are often needed to carry out such strategies, especially in conditions of intensified competition.

H4a: Increases in the level of competitive hostility weaken the relationship between marketing synergy and the preannouncement.

H4b: Increases in the level of competitive hostility weaken the relationship between marketing synergy and launch timeliness.

H4c: Increases in the level of competitive hostility strengthen the relationship between marketing synergy and the intensity of launch.

3. Control Variables

Although the proposed model primarily focuses on the direct impacts of product advantage and marketing synergy and the moderating effects of competitive hostility, it seemed prudent to control for two factors found by past research that are relevant to launch decision. The first factor is the proportion of own brands, measured as the proportion of own brand sales (total deducts OEM/ODM) to total sales. The research in international branding of Taiwanese enterprises, e.g., Horng and Wu (1999), found that marketing strategies and performance differ across own brand and OEM/ODM products. Market turbulence, on the other hand, refers to "the rate of change in composition of customers and their preferences" (Jaworski and Kohli, 1993; Kohli and Jaworski, 1990). It represents another factor beyond the immediate control of management that can affect a product's launch decision. Customer demand fluctuates dramatically in a market characterized by high market turbulence, to which the firms in the market must adjust (Calatone, Di Benedetto, and

Bhoovaraghavan, 1994). As demand is uncertain because of changing consumers or changing preferences among consumers, customer orientation is essential for learning both the customers' needs and buying incentives (Gatignon and Xuereb, 1997). When it is not possible to predict what consumers want, the role of marketing in new product development process becomes limited and the optimal strategy might be to pursue many R&D alternatives and wait until more information is available.

Method

1. Research Design

The unit of analysis in this study is the individual new product, rather than a firm or a business unit. Data were collected from key informants for each construct under study. The use of key informant methods will be in conjunction with survey data-collection procedures. The key informants in this study include managers who are responsible for, or highly involved in, introducing new products. The managers were asked to recall one new product their firm launched recently and answer the relevant questions. A product is defined as new as long as it is new to the firm.

The survey instrument was developed to fit the study setting based on literature search and a pilot study. The sampling frame includes a wide range of industries such as automobiles, chemicals, computers, electronics, pharmaceutical, mechanical equipment, etc., in which the launching phenomena are prevalent and salient. A stratified random sample of 1,000 firms was chosen out of the database list of Common Wealth 2,000 top enterprises, which covers firms operating within Taiwan. One hundred and eight questionnaires were completed and returned, resulting in a 10.8% overall response rate. Of these, 94 questionnaires (9.4%) were usable after we eliminated the invalid questionnaires due to missing data. To ensure that the sample was representative of the entire population, t-tests were used to estimate the possibility of nonresponse bias. Specifically, we examined the differences for three firm-related variables, i.e., the proportion of own brands, firm size, and annual sales, between the early and late respondents of the sample (Armstrong and Overton, 1976). No significant difference exist between these two groups in any of the three measures (for the proportion of own brands: t = .361, p = .719; for firm size: t = -.07, p = .944; for annual sales: t = -.072, p = .943). With the evidence, it can therefore be concluded that nonresponse bias does not appear to be a serious concern in this research.

2. Measures

The likelihood of preannouncement was measure by one statement requesting the respondents to answer their propensity to conduct new product preannouncement on a 7-point Likert scale. The timeliness of launch was developed based on the research of Di Benedetto (1999). A 4-item measure was used to capture this construct on 7-point Likert scales. The extent to which a firm expends resources on product launch was used to represent the construct of launch intensity. The measure is composed of four items on 7-point Likert scales.

Product advantage refers to the superiority and/or differentiation over competitive offerings (Henard and Szyamnski, 2001). It was assessed by a set of five items, on 7-point strongly disagree/strongly agree scales. The construct of marketing synergy was operationalized as an 8-item multidimensional scale adapted from Song and Montoya-Weiss (2001). It captures the extent to which a firm's capability is sufficient in marketing research, sales force, distribution, advertising, promotion, etc. Competitive hostility indicates the combativeness of the product category competitors (Eliashberg and Robertson, 1988). A self-rated 6-item scale of competitive hostility adapted from Atuahene-Gima (1995), Eliashberg and Robertson (1988), Jaworski and Kohli (1993), and Slater and Narver (1994) was used to assess the breadth and aggressiveness of competitive actions. All scores were reported on 7-point "strongly disagree-strongly agree" Likert scales.

The proportion of own brands was measured as the percentage of own brand sales in total sales. The market turbulence construct was captured based on the measures developed by Jaworski and Kohli (1993) and Gatignon and Xuereb (1997). The 6 Likert items captured the extent to which customers' composition, preferences, and demand levels are changeable and unpredictable.

4. Construct Validation

A series of exploratory factor analyses were employed for the multi-items that remained after the item-to-total correlation analyses to further purify the measurement indicators (Gerbing and Anderson, 1988). The method of principle components in conjunction with the latent root criterion, which demands factors with eigenvalues greater than 1 to be considered significant, was the technique for extracting factors. Items of the same scale were eliminated that failed to exhibit significant loading on the focal factor or that cross-loaded as highly on other factors. A cutoff value of .40 was adopted as a criterion for screening (moderately) significant factor loadings (Gerbing and Anderson, 1988).

As shown in Table 1, the Cronbach's alphas of multi-item scales are all above .70 (Nunnally, 1978), with five constructs above .80: product advantage (.90), marketing synergy (.92), competitive hostility (.82), launch timeliness (.90), and launch intensity (.89). The alpha value of market turbulence is .71. The alpha values for the six constructs demonstrate adequate internal consistency, in terms of the standard in management studies (e.g., Eliashberg and Robertson, 1988; MacKenzie, Podsakoff, and Ahearne, 1998; Niehoff and Moorman, 1993).

Analyses and Results

1. Hypothesis Testing

The hypotheses were tested using the moderated regression analysis suggested by Aiken and West (1991), Arnold (1982), and Sharma, Durand, and Gur-Arie (1981). We examined the effects of product advantage and marketing synergy on launch activities, i.e., preannouncement, launch timeliness, and launch intensity, by using multiple regression. The model included the main effects of the covariates, independent variables, and moderator variables, along with the relevant independent variable × moderator interactions. The correlations among independent variables showed a range from 0 to .27 (see Table 1). In the regression models, all independent variables were mean centered in order to minimize multicollinearity among interactive terms and their constituent terms (Aiken and West, 1991; Jaccard, Wan, and Turrisi, 1990). Variance inflation factors (VIFs) were also calculated for independent variables. All the values were well below ten, the cutoff point for eliminating multicollinearity problems (Myer, 1986).

TABLE 1 Descriptive Statistics, Reliabilities, and Intercorrelations Among Refined Measures

Measures	Mean	Standard Deviation	Alpha	Pearson Correlations							
				1	2	3	4	5	6	7	8
1. Product Advantage	5.52	1.07	.90	1.00							
2. Marketing Synergy	4.64	1.11	.92	.27*	1.00						
3. Competitive Hostility	5.56	.94	.82	.04	.10	1.00					
4. Preannouncement	4.66	1.26	.87	.38**	.53**	.13	1.00				
5. Launch Timeliness	4.61	1.22	.90	.38**	.52**	.13	.53**	1.00			
6. Launch Intensity	4.00	2.64	.89	.13	.22*	.16	.25	.14	1.00		
7. Self-Own Brand	61.5	36.95	—	.02	.37	.15	.09	.23*	-.03	1.00	
8. Market Turbulence	4.20	1.31	.71	.05	.10	.43**	.06	.19	.23	.07	1.00

*Significant at $p < .05$.

**Significant at $p < .01$.

Separate regression analyses were performed for each of the three dependent variables (i.e., preannouncement, launch timeliness, and launch intensity). Two control variables representing the proportion of own brands and market turbulence were included in all regression models. The detailed results of these tests are discussed subsequently. The results for all three models are presented in Table 2. As can be seen in Table 2, the terms in the first model account for 47% of the variance in the likelihood of preannouncement, and the F statistic was 8.33 ($p < .001$). The second model explains 34% of the variances of launch timeliness, with the F value 4.94 ($p < .001$). The third model in which launch intensity is the dependent variable enjoys .17 R^2 value ($F = 1.84, p < .1$).

1. Main Effects of Product Advantage on Launch Decisions

Product advantage was predicted to have positive effects on preannouncement and launch timeliness and a negative effect on launch intensity. As shown in Table 2, the main effect of product advantage on preannoucement (H1a) is significant in the expected direction ($\beta = .272$, $p < .01$). As expected, product advantage was positively related to launch timeliness ($\beta = .259$, $p < .05$). H1b is supported. Nevertheless, H1c is not supported as product advantage failed to show a significant negative impact on launch intensity ($\beta = -.041, p > .1$).

2. Main Effects of Marketing Synergy on Launch Decisions

We found that marketing synergy is positively related to preannouncement ($\beta = .468$, $p < .01$). H2a is supported. In addition, as predicted in H2b, marketing synergy has a positive effect on launch timeliness ($\beta = .412$, $p < .01$). It was hypothesized that marketing synergy would have a positive relationship with launch intensity. This prediction, however, is not supported because the regression coefficient is not significant ($\beta = .153, p > .1$).

3. Moderating Effects of Competitive Hostility on the Effects of Product Advantage

Consistent with our expectation, the relationship between product advantage and preannouncement is strengthened by competitive hostility. The interactive effect of competitive hostility and product advantage on preannouncement is significant in the

TABLE 2 Results of Moderated Regression Analysis

	Preannouncement		Launch Timeliness		Launch Intensity	
Covariates:						
Proportion of Own Brands	-.133	(-1.3)	-.026	(-.233)	-.188	(-1.466)
Market Turbulence	.572	(.57)	.158	(1.445)	.173	(1.387)
Main Effects						
Product Advantage	.272**	(2.87)	.259**	(2.458)	-.041	(-.315)
Marketing Synergy	.468**	(4.60)	.412**	(3.648)	.153	(1.146)
Competitive Hostility	.090	(.882)	-.054	(-.472)	-.042	(-.321)
Interactive Effects						
Competitive Hostility × Product Advantage	.312	(3.24)	.111	(1.036)	-.305**	(-2.323)
Competitive Hostility × Marketing Synergy	-.019	(-.19)	-.215*	(-1.922)	.326**	(2.521)
Full Model						
F(7, 66)	8.334***		4.944***		1.836*	
R^2	.469		.344		.165	
Adj R^2	.413		.274		.075	

Note: The regression coefficients are standardized regression coefficients with t values in parentheses.

*Significant at $p < .10$

**Significant at $p < .05$

***Significant at $p < .01$

expected direction ($\beta = .312$, $p < .01$). Nevertheless, the moderating effect of competitive hostility on the relationship between product advantage and launch timeliness is not significant ($\beta = .111$, $p > .1$). Finally, H3c predicted that the negative relationship of product advantage with launch intensity would decrease when competitive hostility increases. This hypothesis is supported as the regression coefficient of the interactive term is significant ($\beta = .326$, $p < .05$).

4. Moderating Effects of Competitive Hostility on the Effects of Marketing Synergy

It is hypothesized that competitive hostility would weaken the relationship between marketing synergy and preannouncement. This hypothesis, however, is not supported as the regression coefficient of the interactive term (competitive hostility and marketing synergy) is not significant ($\beta = -.019$, $p > .1$). In contrast, the moderating effect of competitive hostility on the relationship between marketing synergy and launch timeliness is supported because of a significant regression coefficient of the interactive term ($\beta = -.215$, $p < .1$). In a similar vein, competitive hostility, as expected, shows a significant negative impact on the relationship between marketing synergy and launch intensity ($\beta = -.305$, $p < .05$).

Discussion and Conclusions

In this research, we examined how product advantage and marketing synergy influence product launch activities and how the effects are moderated by competitive hostility. The empirical results, as summarized in Table 3, indicate that new product preannouncement is positively influenced by product advantage and marketing synergy. Likewise, product advantage and marketing synergy have positive impacts on the timeliness of launch. Nevertheless, neither product advantage nor marketing synergy has any influence on launch intensity. The unexpected findings imply that the decision of promotional activities for product launch may be independent of product advantage and marketing synergy.

TABLE 3 Summary of Hypothesis Testing

Relationships	Hypothesis	Expected Sign	Result
Product Advantage → Preannouncement	H1a	+	Supported
Product Advantage → Launch Timeliness	H1b	+	Supported
Product Advantage → Launch Intensity	H1c	–	Not Supported
Marketing Synergy → Preannouncement	H2a	+	Supported
Marketing Synergy → Launch Timeliness	H2b	+	Supported
Marketing Synergy → Launch Intensity	H2c	+	Not Supported
Competitive Hostility on Product Advantage→ Preannouncement	H3a	+	Not Supported
Competitive Hostility on Product Advantage→ Launch Timeliness	H3b	+	Not Supported
Competitive Hostility on Product Advantage→ Launch Intensity	H3c	–	Supported
Competitive Hostility on Marketing Synergy→ Preannouncement	H4a	–	Not Supported
Competitive Hostility on Marketing Synergy→ Launch Timeliness	H4b	–	Supported
Competitive Hostility on Marketing Synergy→ Launch Intensity	H4c	+	Supported

As expected, the relationship between product advantage and preannouncement is strengthened by competitive hostility. However, the hypothesized moderation of competitive hostility on the relationship of preannouncement with marketing synergy was not confirmed. As for the moderating effects of competitive hostility on the relationships of launch timeliness with both product advantage and marketing synergy, competitive hostility fails to show the predicted moderating effect on the product advantage –launch timeliness link. In contrast, the influence of marketing synergy on launch timeliness decreases as competitive hostility increases. Finally, the interactions of competitive hostility with both product advantage and marketing synergy on launch intensity are both significant. The negative impact of product advantage on launch intensity decreases as competitive hostility increases, while the influence of marketing synergy on launch intensity is positively affected by competitive hostility.

1. Limitations of the Research

This research inevitably has three inherent limitations. The first limitation of the research concerns the use of single key informant per unit of analysis. The second research limitation involves the measurement issues with respect to the adoption of existing measures from past research to fit Taiwan's context. The third research limitation is concerned with the questionnaire used in this research.

As decisions on introducing new products usually involve a group of top managers, a single manager's responses may not be able to fully account for the aggregate decision-making behavior. To the extent that the managers disagree with one another, the construct measures acquired based on one manager's perception represent, at best, approximations of the factual information (cf. Kohli, 1989). However, the use of information from only a single source to generalize about an organization's situation may be misleading. Such information is selective, if not biased, owing to the informant's position or other characteristics or his/her way of using and weighting the information when making judgments (Bowman and Ambrosini, 1997; Philips, 1981). While the key informant approach is a widespread practice, the use of single-informant data in this research is still a major problem. The data themselves might be inherently inadequate or unreliable even though the strict criteria have been met for selecting key informants from the responding companies.

Although this research adopted the measures of interest from existing studies, language translation and context adaptation may still cause potential problems. Measurement errors may be likely to occur due to the issues specific to the characteristics of Taiwan's firms and industries. On the other hand, the low effective response rate (9.4%) in the research may be attributable to the length and complexity of this questionnaire. Such a low response rate, to some extent, attenuates the generalizability of the research findings although it is still within the acceptable range.

2. Managerial Implications

This research investigates the management of new product introduction under different conditions shaped by product, firm, and market characteristics, namely product advantage, marketing synergy, and competitive hostility. The findings may offer managerial guidelines for launching products. First, firms intending to preannounce new products must comprehend that their proneness to preannounce varies across different levels of product advantage and marketing synergy. The firms with greater product advantage and higher marketing synergy are more inclined to conduct message-releasing activities before official product launch. Second, firms are more likely to accelerate their product launch when they enjoy superior product advantage and marketing synergy. However, the positive impact of marketing synergy on launch timeliness would become weaker if market competition is stronger. Finally, product advantage would lead to intensive launch activities only when competitive hostility is weak. In contrast, marketing synergy tends to result in more large-scale promotions for product launch only especially when market competition is stronger.

This study explores the phenomena of launching new products in the domain of product management. It tries to investigate managerial issues on product launch under the consideration of various product, firm, and market characteristics. Specifically, different situational factors demonstrate varying influences on preannouncement, launch timeliness, and launch intensity. Product advantage and marketing synergy represent the motives for launching new products, while competitive hostility, the moderator, either fortifies or shadows such driving forces. The motives, intertwined with the moderator, construct the rationale underlying every managerial decision for product launch. Following the rationale, this study links the strategic behaviors for launching products with their antecedents. This study may represent a further step toward dealing with a managerial challenge—to launch the right products to the right customers through the right media at the right time.

3. Directions for Future Research

On the basis of this exploratory research, several research directions can be identified that may be worth pursuing. First, it would be useful to investigate further various product launch strategies. For instance, efforts may be made to explore different facets of launch activities and investigate into the pattern of their combinations. More emphasis should be placed on the potential interactive effects among the relevant activities of product launch.

Industry effect may represent the next promising topic for the research of product launch decision. Hultink, Hart, Robben, and Griffin (1997) indicate that, for consumer products, product launch decisions appear more defensive in nature, as they focus on defending current market positions. In contrast, industrial product launch decisions seem more offensive, using technology and innovation to push the firm to operate outside their current realm of operations and move into new markets. It would be interesting to incorporate more industry factors into the research model to probe the industry effect on launch decision-making.

The research may be extended to investigate different forms of product launch as well. As multi-product firms often develop a variety of new products at the same time, they are more likely to launch their products simultaneously (Rabino and Moore 1989). It is therefore important to distinguish the differences between single product and "bundling" (multiple product) launch. Another research direction is to examine product launch along the time dimension. Product launch may exhibit different patterns over time. In other words, different launching modes may be identified, by studying the behaviors of product launch from a longitudinal perspective.

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